

## Problem I: It Belongs in a Museum

In his youth, Indiana Jones used to go horseback riding with his Boy Scout troop around Utah. One day, he comes across a cave where he finds a group of men digging for treasure. From the distance, Indy sees a small table where a number of objects are placed. From there, Indiana cannot see the objects on the table with much detail, but he can identify an important object by its general appearance.

When he gets close, he finds the Cross of Coronado, an “important artifact” which belongs in a museum, according to Indy’s tenacious spirit as a future archaeologist.



Figure 1: Indy taking the Cross of Coronado

You are given a rectangular grid of characters representing the image of what Indy sees on the table. You are to determine the number of important artifacts that are on the table. The contents of each position in the grid can be one of three alternatives:

- A dot (.). Represents an empty space on the table.
- An at sign (@). Represents part of an important object.
- A number sign (#). Represents part of an unimportant object.

Any adjacent cells (horizontally, vertically, or diagonally) that contain @ are considered part of the same object.

### Input

Input starts with a positive integer **T**, that denotes the number of test cases ( $T \leq 500$ ).

The first line of each test case contains two integer numbers, **R** and **C** which represent the number of rows and columns in the grid.  $1 \leq R, C \leq 100$ .

The following  $R$  lines contain  $C$  characters, as described above.

### Output

For each test case, print the case number, and then print the number of important artifacts on the table that belong in a museum.

## Sample Input

```
1
10 14
.....
...@@.....
.@@@@@@.###.
.@@@@@@.###.
...@@...###.
...@@.@.....
...@@.@.....
.....@.....
..###.....
.#####
```

## Output for Sample Input

Case 1: 2